

Topten laser printers

Guidelines for Frontrunner Public Procurers



Photo courtesy of silicon.com

What is Topten?

- Topten.eu is a European web portal helping buyers to find **the most energy efficient products available in Europe**. Links to national Topten websites from a number of European countries are also available.
- All laser printers displayed on www.topten.eu meet the criteria set out in these guidelines. Procurers can therefore use the website to check the availability of products currently on the market, which meet the **Topten selection criteria**.
- **Sample tender documents** are provided on www.topten.eu/professional to demonstrate how the criteria can be applied in practice.
- The European Commission's [GPP website](http://www.gpp.eu) also contains valuable legal and practical guidance together with procurement criteria for a range of commonly procured products and services.

Product group covered: All laser printers, both colour and monochrome.

Product availability: All products listed at www.topten.eu meet the criteria listed below.

Potential energy savings:¹ The energy consumption of similar products can vary considerably – The most efficient laser printer **consumes 80% less energy** than an inefficient model with a similar printing speed.

Potential cost savings:¹ In the following example, **a saving of €219** in electricity costs would be achieved over 5 years² with a Topten printer, compared to an inefficient model with a **similar speed** in ipm (images per minute).

The energy consumption of laser printers is largely determined by print speed, so using **slower laser printers** achieves even more significant savings in energy costs. In the example below **€380** could be saved over 5 years by replacing a faster inefficient model (*45 ipm, €415*) with a slower Topten printer (*20 ipm, €35*).

Speed	Inefficient model	Topten Laser Printer	Saving over 5 years ²
45 ipm	€415	€82	€333
20 ipm	€176	€35	€141

¹ These represent rough figures comparing the best product currently available, with an inefficient model available on the market– see www.topten.eu for more details.

² Based on electricity price of €0.15/kWh and 5 years is used as a mean lifetime for laser printers.

Procurement criteria – Updated: June 2013

The following criteria can be inserted directly into tendering documents. The specifications are updated continuously. The newest versions are always available at www.topten.eu

Technical specifications:	<p>1. Products must meet the latest criteria of the ENERGY STAR Programme Requirements for Imaging Equipment.</p> <p>Verification: Products carrying the ENERGY STAR label will be deemed to comply. Alternatively, bidders may demonstrate compliance with the above requirements by another objective third-party means or by supplying test results in respect of their product demonstrating that the criteria are met.</p>						
	<p>2. In addition to the above requirements, products must not exceed the following maximum Energy Efficiency Index (EEI, in %)</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th></th> <th>Maximum Energy Efficiency Index (EEI)</th> </tr> </thead> <tbody> <tr> <td>colour</td> <td>40%</td> </tr> <tr> <td>monochrome</td> <td>50%</td> </tr> </tbody> </table> <p>I.e. the Typical Energy Consumption (TEC) of the product must only reach these proportions, or less, of the maximum ENERGY STAR TEC for that particular type and speed of printer.</p> <p>NB: Please refer to the Appendix for a table in which maximum TEC values fulfilling these requirements have been calculated for each speed of printer.</p> <p>Verification: Bidders must supply test results demonstrating that these requirements are met according to the methodology set out in the latest ENERGY STAR Programme Requirements for Imaging Equipment. ENERGY STAR's TEC limit values can be found in this document and hence the EEI of a product may be calculated.</p> <p>TEC values for products can be verified by:</p> <ul style="list-style-type: none"> • Producers' declarations, found in catalogues, on the web or upon request • Declarations by 'ENERGY STAR' 		Maximum Energy Efficiency Index (EEI)	colour	40%	monochrome	50%
	Maximum Energy Efficiency Index (EEI)						
colour	40%						
monochrome	50%						
	<p>3. Must be able to print on recycled paper</p> <p>Verification: Bidders must supply a technical dossier or test results demonstrating this requirement is met.</p>						
	<p>4. All products with a printing speed ≥ 19 ipm (images per minute) must be equipped with an automatic double-sided printing function.</p>						

Notes on implementation

- **Energy Efficiency Index (%)**

The Energy Efficiency Index (EEI, in %) is calculated by Topten based on the product's TEC and Energy Star's TEC limit value: $EEI = TEC * 100 / TEC \text{ limit value}$. **The lower a product's EEI, the better is its energy efficiency.**

Maximum EEI values for Topten laser printers relate to TEC limit values in the following way:

- **Colour** printers must only use **40% or less** of the TEC required by ENERGY STAR for the speed of printer in question
- **Monochrome** (black & white) printers must only use **50% or less** of the TEC required by ENERGY STAR for the speed of printer in question

Please refer to the Appendix for a table containing maximum TEC values for products of each printing speed up to 100 ipm, in black & white and colour, which fulfil these Topten requirements.

- **Market checks**

National websites may also be used by procurers to check that there are products on the market that meet Topten criteria in a particular country. Links to Topten websites in many different European countries can be found on www.topten.eu. Appearance on national websites should not be used as a means of verification of technical specifications however, as performance is based on self-declaration by suppliers.

- **Duplex printing**

Printing double-sided can save even more energy than choosing an energy efficient laser printer. The production of paper consumes a considerable amount of energy, therefore reducing paper consumption by printing on both sides contributes to energy saving.

- **Using award/evaluation criteria**

The exact model used for evaluating compliant tender bids will vary from authority to authority. If you apply this criterion however, it should be given a significant weighting (at least 10-15%) in the evaluation scheme.

Advice and support

If you would like further assistance in using the information presented here in your own procurement actions or more information on Topten Pro please contact the Procura+ team at:

Procurement@iclei.org +49 761 368 9248

An expression of interest form is also available on www.topten.eu/pro for public authorities who would like support to apply these criteria in an upcoming procurement process.



What is Procura+?

Procura+ is an initiative designed to help support public authorities in implementing Sustainable Procurement. The campaign is run by ICLEI – Local Governments for Sustainability – and is the Topten partner for public authorities.

www.procuraplus.org

Appendix

Specification 2 requires that laser printers must not exceed the following maximum TEC in kWh/week.

All products with TEC values below these thresholds are considered to be Topten laser printers until the criteria are updated in response to development of the market:

Speed (ipm)	Max. TEC (kWh/week)		Speed (ipm)	Max. TEC (kWh/week)		Speed (ipm)	Max. TEC (kWh/week)		Speed (ipm)	Max. TEC (kWh/week)	
	b/w	Colour		b/w	Colour		b/w	Colour		b/w	Colour
1	0.50	1.16	26	1.05	2.16	51	3.78	5.06	76	8.15	10.88
2	0.50	1.20	27	1.10	2.20	52	3.95	5.20	77	8.33	11.16
3	0.50	1.24	28	1.15	2.24	53	4.13	5.34	78	8.50	11.44
4	0.50	1.28	29	1.20	2.28	54	4.30	5.48	79	8.68	11.72
5	0.50	1.32	30	1.25	2.32	55	4.48	5.62	80	8.85	12.00
6	0.50	1.36	31	1.30	2.36	56	4.65	5.76	81	9.03	12.28
7	0.50	1.40	32	1.35	2.40	57	4.83	5.90	82	9.20	12.56
8	0.50	1.44	33	1.40	2.54	58	5.00	6.04	83	9.55	12.84
9	0.50	1.48	34	1.45	2.68	59	5.18	6.12	84	9.90	13.12
10	0.50	1.52	35	1.50	2.82	60	5.35	6.40	85	10.25	13.40
11	0.50	1.56	36	1.55	2.96	61	5.53	6.68	86	10.60	13.68
12	0.50	1.60	37	1.60	3.10	62	5.70	6.96	87	10.95	13.96
13	0.50	1.64	38	1.65	3.24	63	5.88	7.24	88	11.30	14.24
14	0.50	1.68	39	1.70	3.38	64	6.05	7.52	89	11.65	14.52
15	0.50	1.72	40	1.75	3.52	65	6.23	7.80	90	12.00	14.80
16	0.55	1.76	41	2.03	3.66	66	6.40	8.08	91	12.35	15.08
17	0.60	1.80	42	2.20	3.80	67	6.58	8.36	92	12.70	15.36
18	0.65	1.84	43	2.38	3.94	68	6.75	8.64	93	13.05	15.64
19	0.70	1.88	44	2.55	4.08	69	6.93	8.92	94	13.40	15.92
20	0.75	1.92	45	2.73	4.22	70	7.10	9.20	95	13.75	16.20
21	0.80	1.96	46	2.90	4.36	71	7.28	9.48	96	14.10	16.48
22	0.85	2.00	47	3.08	4.50	72	7.45	9.76	97	14.45	16.76
23	0.90	2.04	48	3.25	4.64	73	7.63	10.04	98	14.80	17.04
24	0.95	2.08	49	3.43	4.78	74	7.80	10.32	99	15.15	17.32
25	1.00	2.12	50	3.60	4.92	75	7.98	10.60	100	15.50	17.60